



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,936	07/10/2003	Murali Rajagopalan	20002.0302	9938
23517	7590	05/26/2005	EXAMINER	
SWIDLER BERLIN LLP 3000 K STREET, NW BOX IP WASHINGTON, DC 20007			BUTTNER, DAVID J	
		ART UNIT		PAPER NUMBER
		1712		

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/615,936	RAJAGOPALAN ET AL.	
<b>Examiner</b>	<b>Art Unit</b>		
David Buttner	1712		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-24 is/are pending in the application.
  - 4a) Of the above claim(s) 7-21 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,22-24 is/are rejected.
- 7) Claim(s) 6 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____.                                    |

Applicant's election with traverse of claims 1-6 and 22-24 in the reply filed on 4/13/05 is acknowledged. The traversal is on the ground(s) that there is no serious burden to examine all the claims. This is not found persuasive because the common requirement between the two groups is golf ball containing a thermoplastic of polyphenylene diisocyanate. As is shown by Hewitt '432, this is not patentable. Patentability (if present) must hinge on other claim limitations. Group I requires certain thicknesses, flex modulii, Shore D values and the presence of a thermoset layer. Group II does not require these limitations, but instead call for certain rebound resilience and overall ball COR. The patentability of I does not necessitate a finding of patentability of II and vice versa.

The requirement is still deemed proper and is therefore made FINAL.

Parent application 6,645,091 does not have basis for the currently claimed psi, hardness and thickness ranges. Parent 6,673,859 does not have basis for the 80,000psi, Shore D>30, thermoset inner cover and thicknesses now claimed. The effective filing date for the claims is 7/10/03.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"poly(hexamethylene carbonate) glycol polycarbonate polyols" is not understood. Are two separate species intended?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 24-27 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kennedy 2002/0193181.

Kennedy claims (#22-23) golf balls having a core, inner cover and outer cover. Either cover can be a thermoset or thermoplastic polyurethane. The polyurethane can be based on phenylene diisocyanate (paragraph 104) and has a shore D hardness of 30-55 and a flex modulus of 5-20 Kpsi (paragraph 107). The thickness of the inner cover is 0.03-0.07 inches (paragraph 37). The thickness of the outer cover is 0.03-0.06 inches (paragraph 72). Producing a ball meeting all these limitations simultaneously would be at least obvious if not anticipated, because Kennedy suggests all the limitations are possible.

Claims 1-3 and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy 2002/0193181 in view of Hewitt '432 or Holloway '657 or Dewanjee '024.

Art Unit: 1712

Kennedy suggests polyurethanes from phenylene diisocyanates, but does not exemplify such a polyurethane.

Each of the secondary references actually produce such polyurethane covers and tout its properties. It would have been obvious to use any known phenylene diisocyanate based polyurethane in Kennedy's ball for the expected advantages.

Claims 1-5 and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy 2002/0193181 in view of Dewanjee '024 and the Polyurethane Handbook.

Kennedy suggests polyurethanes from phenylene diisocyanates, but does not teach what polyols are used to react with the diisocyanate.

Dewanjee suggests such polyurethane covers based on phenylene diisocyanate and polyetherpolyols or polycaprolactonepolyols (col 12 line 19-21) and tout their properties. It is also well known in the urethane art that the most common polyetherpolyols are ethylene oxide and propylene oxide based polyethers. Furthermore, it is well known that polycaprolactone polyols must initiated with a diol. The Polyurethane Handbook (page 22) is cited for its discussion of polyetherpolyols and polycaprolactonepolyols in urethanes.

It would have been obvious to use any known phenylene diisocyanate based polyurethane in Kennedy's ball for the expected advantages.

Claims 1-3 and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan '831 in view of Hewitt '432 or Holloway '657 or Dewanjee '024.

Art Unit: 1712

Sullivan teaches golf balls having a core, inner cover and outer cover. Either cover can be a thermoset or thermoplastic polyurethane (col 14 line 66; col 23 line 20-24). . The outer cover has a modulus of 1,000-10,000psi (col 15 line 17), a thickness of 0.03-0.06 inches (col 15 line 32) and a Shore D of less than 50 (col 15 line 38). The inner cover has a thickness of 0.03-0.07 inches (col 6 line 59), a Shore D of >60 (col 6 line 66) and a modulus of >30,000psi (col 14 line 64). Sullivan does not teach the monomeric makeup of the polyurethane.

Each of the secondary references produce such polyurethane covers from phenylene diisocyanate and tout its properties. It would have been obvious to use any known phenylene diisocyanate based polyurethane in Sullivan's ball for the expected advantages.

Claims 1-5 and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy Sullivan '831 in view of Dewanjee '024 and the Polyurethane Handbook.

Sullivan/Dewanjee suggests polyurethanes from phenylene diisocyanates, but does not teach what polyols are used to react with the diisocyanate.

Dewanjee suggests such polyurethane covers based on phenylene diisocyanate and polyetherpolyols or polycaprolactonepolyols (col 12 line 19-21) and tout their properties. It is also well known in the urethane art that the most common polyetherpolyols are ethylene oxide and propylene oxide based polyethers. Furthermore, it is well known that polycaprolactone polyols must initiated with a diol. The Polyurethane Handbook (page 22) is cited for its discussion of polyetherpolyols and polycaprolactonepolyols in urethanes.

It would have been obvious to use any known phenylene diisocyanate based polyurethane in Sullivan's ball for the expected advantages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Buttner

5/20/05

DAVID J. BUTTNER  
PRIMARY EXAMINER

